

Can Rigid Budgetary Control System Reduce Budgetary Slack Behavior?

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Abstract

The creation of budgetary slack makes a budgetary goal easier to attain, thus prior studies have presumed that its creation is dysfunctional behavior. In organizational context, where the budgetary control system operates, organizational size and decentralization are considered to be important factors impacting both rigid budgetary control system and budgetary slack. Based upon a structural equation model, research hypotheses were tested using a sample of 150 subordinate managers of publicly owned corporations in Taiwan. This study finds that large size and decentralized firms conceal large amount of budgetary slack, and for managerial sake these firms always adopt rigid budgetary control system. However, the rigid budgetary control cannot significantly reduce the budgetary slack intention. We conclude the paper with comparing the findings of this study with those of prior studies and referring to possible ways to prevent the slack behavior.

Keywords: Budgetary Slack, Decentralization, Organizational Size, Rigid Budgetary Control

1. Introduction

Budgetary slack is commonly happened in organizations. It can be defined as subordinate managers intentionally underestimate revenues and productivities and/or overestimate costs and resources for easier attainment to a budget goal (Brownell, 1982; Dunk, 1993; Merchant, 1985; Onsi, 1973). Agency theory argues that budgetary slack induces organizational resources to be misallocated and results in suboptimal performance; therefore, it can be viewed as an unethical behavior. (Douglas and Wier, 2000; 2005). Prior studies have shown great interest in understanding the possible effects of rigid budgetary control on slack (Dunk, 1993; Leavins, Omer and Vilutis, 1995; Lukka, 1988; Merchant, 1985; Onsi, 1973; Otley, 1978; Van der Stede, 2000). Meanwhile, several studies pointed out that the budgetary control system is used differently in different organizational context (Merchant, 1981; Onsi, 1973; Otley, 1978). However, prior empirical studies did not simultaneously consider the impact of organizational context and budgetary control system on the budgetary unethical behavior. This study thus integrates rigid budgetary control and two organizational factors, organizational size and decentralization which are thought to be strongly

related to the choice of budgetary control style and slack (Bruns and Waterhouse, 1975; Merchant, 1981; Onsi, 1973), to frame a structural model of budgetary slack creation. Based on Taiwanese data, the purpose of this study is to explore the following questions: Can budgetary slack be affected by rigid budgetary control? Can budgetary slack be affected by organizational size and decentralization? Can rigid budgetary control be affected by organizational size and decentralization?

2. Literature review and research hypotheses

A rigid budgetary control is a kind of budgetary control style which emphasizes achievement of subordinate managers' budget goals. Because the rigid budgetary control is based primarily upon whether subordinate managers meet their budget goals against which their performance is evaluated. It implies that subordinate managers' compensation and career prospects are highly related to the rigid budgetary control. Therefore, as economic individuals, for self-interest, they are expected to create slack (Leavins et al., 1995; Lukka, 1988; Onsi, 1973). We thus suggest that there is a positive relationship between rigid budgetary control and slack, which leads to the following hypothesis:

H1: Rigid budgetary control is positively related to budgetary slack.

From agency theory, prior studies proposed that information asymmetry which arises when subordinates' information relevant to the decision course exceeds that of their superiors can be the major factor to induce the control problem (Young, 1985; Dunk, 1993; Shields and Young, 1993). Onsi (1973) assumed that superior managers in large firms do not know relatively more about local conditions than do subordinate managers leading to information asymmetry, thus subordinate managers perhaps use their private information to make decision consistent with self-interest (Kren and Liao, 1988). In addition, when information asymmetry exists, subordinate managers may feel less social pressure to misrepresent their expected performance (Young, 1985; Chow, Cooper and Waller, 1988). We thus suggest that the larger the organizational size, the more likely the subordinate managers to intentionally misrepresent their capability and productivity, and thereby create slack.

Large organizations make communication more difficult (Child, 1972a). In this setting, the introduction of decentralization, i.e. the delegation of authority and work roles to lower level managers, can be an effective practice (Bruns and Waterhouse, 1975). Child (1973) and Bruns and Waterhouse (1975) proposed that size is the major predictor of decentralized structures. Therefore, as an organization grows, it tends to be decentralization. Collectively, above discussions related to the impact of organizational size lead to the following hypotheses:

H2: Organizational size is positively related to:

- a. Rigid budgetary control.**
- b. Budgetary slack.**
- c. Decentralization.**

From the organizational control perspective, several studies found a positive relation between decentralization and the extent to which activities are structured (e.g., Inkson, Pugh and Hickson, 1970; Child, 1972b). Child (1972b) proposed that, by nature of control, the decentralization is always accompanied by emphasizing on formalization. Bruns and Waterhouse (1975) pointed out that, as decision-making authority is decentralized, subordinate managers will be responsible for more financial results. That is, financial control systems, such as report back of financial performance periodically, will be more emphasized in a more decentralized structure. Since budget is a financial plan and provides a basis for directing and evaluating the performance of subordinates, budget is particularly well-suited as a control device under a decentralized structure. Therefore, we expect that the emphasis of budgetary control will be high in a highly decentralized organization.

Bruns and Waterhouse (1975) suggested that budget-related behaviors are contingent on the organizational structure. Prior studies found that the existence of budgetary slack is related to a firm's degree of decentralization (Schiff and Lewin, 1970; Onsi, 1973; Pfeffer and Salancik, 1978). Since the authorized managers can readily access and manipulate the budget resource, they are anticipated to create more slack than less authorized managers. Therefore, decentralization is expected to positively affect the creation of budgetary slack. Collectively, from above discussions, we lead to the following hypotheses:

H3: Decentralization is positively related to:

- a. Rigid budgetary control.**
- b. Budgetary slack.**

3. Research method

This study employed a questionnaire survey to collect empirical data from a sample of subordinate managers who were drawn from manufacturing companies in Taiwan. These companies are publicly owned and each has a formal budgetary system. A mail questionnaire with a cover letter and a self-addressed prepaid envelope was forwarded to 550 subordinate managers who were in different functional areas including marketing, accounting, production and R & D. Recognizing the sensitive nature of some of the information requested, the cover letter provided a statement ensuring the respondents anonymity. In addition, we also informed respondents that there is no right or wrong answer in queried items.

Questionnaires were received from 153 respondents. Three responses were removed from the study for incomplete responses. Therefore, 150 responses were available for data analysis, yielding an effective response rate of 27.3%. The average age of the respondents was 42.8 years, and the average times spent in their present organization and current position was 13.8 years and 5.2 years, respectively. The main functional employment areas represented included accounting (48%), production (28%), marketing (19%), and others (5%). 73% of the respondents were male.

The research instruments were primarily adopted from existing studies as in the Appendix. Therefore, the content validity of these instruments has been pre-established. However, the empirical validity was further checked by factor analysis that is a powerful and indispensable method of construct validity (Kerlinger and Lee, 2000). The response format was a seven point Likert-type scale. Cronbach's (1951) alpha coefficient was calculated to assess the reliability of each variable.

Organizational size: Organizational size was measured by three items: total number of employees, net assets and sales turnover, all of which are indicators of organizational scale (Child, 1973). These items were transformed logarithmically to adjust for the possible nonlinear impacts (Kimberley, 1976). A factor analysis revealed only one factor with an eigenvalue greater than one, which explained 81.49% of total variance. The scores of these items thus were averaged to provide an overall index of organizational size. The alpha coefficient of these items was 0.885.

Decentralization: Decentralization refers to the extent to which authority has been delegated to lower level managers (Waterhouse and Tiessen, 1978). Decentralization was measured using a five-item instrument developed by Gordon and Narayanan (1984). The instrument had been employed by prior studies such as Gul and Chia (1994) and Chia (1995). A factor analysis yielded only one factor with an eigenvalue greater than one, which explained 50.56% of total variance. The alpha coefficient of the instrument was 0.748 in this study.

Rigid budgetary control: Rigid budgetary control is a control style in which subordinate managers are evaluated primarily on whether or not they achieve a budget goal and how well their budget is on target (Van der Stede, 2000). Rigid budgetary control was measured using Van der Stede's (2000) seven-item instrument. A factor analysis showed only one factor with an eigenvalue greater than one, which explained 64.82% of total variance. The alpha coefficient was 0.908 in this study.

Budgetary slack: Budgetary slack refers to the subordinate managers' intentionally setting easier attainable budget goal than their best forecast. Budgetary slack was measured using a four-item instrument from Onsi (1973), which had been employed by several budget-related studies (e.g., Govindarajan, 1986; Nouri and Parker, 1996). A factor analysis revealed only one factor with an eigenvalue greater than one, which

explained 60.53% of total variance. In current study, the alpha coefficient was 0.773.

As with all self-report data, there is a potential for the occurrence of common method variance. The Harman's single-factor test was conducted to determine the extent of common method variance in the current data. Results from this test suggested the presence of four factors, indicating that common method variance was not a pervasive problem in this study.

4. Results

Table 1 presents descriptive statistics for the variables in this study. The descriptive statistics indicate that the range of organizational size is large. In addition, since the minimum and the mean scores of decentralization are 2 and 4.66, respectively. It suggests that all respondents reported having some authority given by their organization. The descriptive statistics also indicate that a maximum slack score of 6 and the mean score of 3.89 suggest that budgetary slack is not extremely high in respondents.

Table 1. Descriptive Statistics and Pearson Correlations

Variable	Mean	s.d.	Range	1	2	3
1. Organizational size	4.36	0.97	2.73-8.53	1.000		
2. Decentralization	4.66	1.01	2.00-7.00	0.319**	1.000	
3. Rigid budgetary control	4.34	0.93	2.00-6.86	0.269*	0.235*	1.000
4. Budgetary Slack	3.89	0.82	1.75-6.00	0.426***	0.423***	0.293*

N=150; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$ (two tails)

The structural equation model was set up with LISREL 8.52. Using averaging scales as the indicators of the research construct and covariance as the input matrix, the results of model estimation are shown in Table 2. Model-fit is marginally good: χ^2 is insignificant ($p = 0.06$); the root mean square error of approximation (RMSEA) is 0.062; and the comparative fit index (CFI) is 0.96 (Browne and Cudeck, 1993). The CFI has been suggested by Bentler (1995) as the best choice for an overall assessment of model fit. Therefore, the model is unlikely to be severely misrepresented and the structural estimates can then be used to test the hypotheses. Table 2 indicates that the relationship between rigid budgetary control and budgetary slack (H1) is weak¹. The positive relationships between organizational size and its impacting variables, rigid budgetary control (H2a), budgetary slack (H2b) and decentralization (H2c), are all significant.

¹ It may be suggested that there exists a nonlinear relationship between rigid budgetary control and budgetary slack. To test the possible relationship, we added a squared term of rigid budgetary control into the original regression model. The result indicated that the coefficient of the squared term was not significant, so the nonlinear relationship cannot be validated.

Table 2 also shows that the positive relationships between decentralization and its impacting variables, both rigid budgetary control (H3a) and budgetary slack (H3b) also remain significant.

Table 2. Multivariate Structural Equation Model

	β^a	t
H1	-0.10	-1.07
H2a	0.20	1.99*
H2b	0.36	3.88***
H2c	0.40	3.36***
H3a	0.27	2.27*
H3b	0.47	3.51***

5. Conclusions

This study aims to examine the effect of rigid budgetary control on budgetary slack, and effects of organizational size and decentralization on both rigid budgetary control and budgetary slack using data from Taiwan. The results suggest that organizational size and decentralization positively and directly influence slack. These findings confirm those of Merchant (1985) and Onsi (1973). Besides, the result indicates that subordinate managers are normally given more authority in larger firms, which confirms works of Child (1972a) and Bruns and Waterhouse (1975). The results also show that larger size and more decentralized structure cause management to implement more rigid budgetary control, which also confirms works of Bruns and Waterhouse (1975) and Merchant (1981, 1984). However, the relationship between rigid budgetary control and slack is ambiguous, which is correspondent with the nature of the conflicted relationship between them discussed in prior studies (cf. Dunk, 1993; Hopwood, 1972; Merchant, 1985; Otley, 1978). The whole model suggests that the large size and decentralized firms embed large amount of budgetary slack no matter how the extent of rigid budgetary control is employed. Besides, for managerial purpose, these firms always adopt rigid budgetary control.

The outcome of this study explicitly contends that large size and decentralized organizations mostly conceal high budgetary slack. Nevertheless, the slack behavior is an unethical behavior and should be discouraged. From the aspect of people's intrinsic motivation, prior studies suggested two possible ways to treat the unethical behavior, which are irrelevant to organization's control systems. One way of deterring the unethical behavior is to stir people's ethical concerns. DeGeorge (1992) and Stevens (2002) asserted that ethically motivated agents will exercise effective self-control that no amount of external control can match. Another possible way is to motivate

managers' organizational commitment. Nouri (1994) suggested that subordinate managers who highly commit to organizational goals and values may have low levels of propensity to create slack, because they understand the dysfunctional effects of slack on organization. We thus suggest that ethical concerns which reflect personal integrity and an aversion to lying, and organizational commitment which is characterized by people's willing to devote time and effort to complete the organizational goals should be good manners to prevent the budgetary unethical behavior.

This study has some governing limitations. Since only manufacturing companies in Taiwan were examined, it should be cautious to generalize the results to other industrial companies and areas. The survey approach has a lack of control over who responds to the questionnaire and over the social desirability bias. However, because measures were taken with anonymity and respondents were informed that there are no standard answers in the questions, with responses mailed directly to researchers, the social desirability bias might be minimized.

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